

What is claimed is

1. An apparatus for detecting leaks in at least one sealed package, wherein said package comprises a closure that is deformable when subjected to an air pressure below atmospheric pressure,
5 said apparatus comprising
a chamber;
wherein said chamber may be opened and closed to allow for loading and unloading of said package,
wherein said chamber when closed can be evacuated or returned to
10 atmospheric pressure,
at least one mechanical switch comprising a head, a tail, and a sensor,
wherein said head is located a first fixed distance from said deformable closure, and said tail is located a second fixed distance from said sensor, when said chamber is closed at atmospheric pressure;
15 and
a mechanism for determining whether a said mechanical switch is open or closed.
2. The apparatus of claim 1 wherein said head is positioned on the surface of
20 said deformable closure when said chamber is closed under atmospheric pressure.
3. The apparatus of claim 1 comprising a plurality of mechanical switches.
- 25 4. The apparatus of claim 1 wherein said sensor is selected from the group consisting of non-contact capacitive proximity type, a laser, an ultrasonic and an optical sensor.
5. The apparatus of claim 1 wherein said sensor is a non-contact capacitive
30 proximity sensor.

6. The apparatus of claim 5 wherein said chamber comprises a first floor and a second floor wherein said second floor comprises at least one mechanical switch.
- 5 7. The apparatus of claim 6 wherein said first floor comprises molded indentations for holding said packages.
8. The apparatus of claim 1 wherein said packages are ophthalmic lens packages.
- 10 9. The apparatus of claim 2 wherein said chamber comprises a first floor and a second floor, wherein said second floor comprises a plurality of mechanical switches and a port for attachment of a vacuum pump.
- 15 10. The apparatus of claim 1 wherein said first fixed distance is about 0 to about 30%.
11. The apparatus of claim 1 wherein said second fixed distance is about the sum of the maximum amount the deformable closure moves at a particular pressure + 80% of the sensing range.
- 20 12. A method for detecting leaks in at least one sealed package, wherein said package comprises a closure that is deformable when subjected to an air pressure below atmospheric pressure,
- 25 said method comprising
- loading said package to a chamber;
- wherein said chamber may be opened and closed to allow for loading and unloading of said package,
- wherein said chamber when closed can be evacuated or returned to atmospheric pressure,
- 30 wherein said chamber comprises at least one mechanical switch, comprising a head, a tail, and a sensor,

- wherein said head is located a first fixed distance from said deformable closure, and said tail is located a second fixed distance from said sensor, when said chamber is closed at atmospheric pressure;
- 5 closing said chamber and reducing the pressure in said chamber to a level below the internal pressure of said package and its contents; determining whether said mechanical switch is open or closed.
13. The method of claim 12 wherein said package is a contact lens package.
- 10 14. The method of claim 12 wherein said pressure is reduced to about greater than or equal to -70 kPa.
- 15 15. The method of claim 12 wherein said head is spring loaded against the surface of said deformable closure when said chamber is closed under atmospheric pressure.
16. The method of claim 12 wherein the method is complete in less than 10 seconds.
- 20 17. The method of claim 12 wherein the method is complete in less than 5 seconds.
18. A method for detecting leaks in at least one sealed package, wherein said package comprises a closure that is deformable when subjected to an air pressure below atmospheric pressure, said method comprising
- 25 loading said package to a chamber; wherein said chamber may be opened and closed to allow for loading and unloading of said package,
- 30 wherein said chamber when closed can be evacuated or returned to atmospheric pressure,

wherein said chamber comprises at least one mechanical switch comprising a head, a tail, and a sensor,

wherein said head is located a first fixed distance from of said deformable closure, and said tail is located a second fixed distance from said sensor, when said chamber is closed at atmospheric pressure;

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closing said chamber and increasing the pressure in said chamber to a level above the internal pressure of said package and its contents;

reducing the pressure in said chamber to a level below the internal pressure of said package and its contents;

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determining whether said mechanical switch is open or closed.